

REMARKS

Applicants affirm the provisional election to prosecute the invention of Group I, Claims 1-13, with traverse.

Applicants have amended **Figure 30**. Applicants respectfully request the Examiner's approval of the amendment to this figures. Amended **Figure 30** is appended to this response with changes marked in red.

In the Office Action mailed August 14, 2002, the Examiner rejected Claims 1-13 under 35 U.S.C. § 102(e) as being anticipated by Ghezzo et al. (U.S. Patent No. 6,127,812) ("Ghezzo"). To the extent that the rejection applies to the amended claims, Applicants respectfully traverse the rejection.

Applicants respectfully submit that Ghezzo teaches forming a three-dimensional first structure, introducing a sacrificial material over the first structure, forming a second structure, introducing a sacrificial material over the second structure, and forming a third structure (Ghezzo, Fig. 11, and accompanying text at col. 5). Applicants respectfully submit that Ghezzo does not teach or suggest the desirability of exposing a portion of the sacrificial material, removing a portion of the second structural material, or of patterning the sacrificial material as recited in Applicants' Claims 1-13.

Specifically, Ghezzo does not teach or suggest the desirability of exposing a portion of the sacrificial material as recited in Applicants' amended Claim 1. Also, Ghezzo does not teach or suggest the desirability of patterning the sacrificial material as recited in Applicants' amended Claim 8.

Applicants respectfully request that the Examiner withdraw the rejection to independent Claims 1 and 8, and dependent Claims 3-7 and 10-13 for at least the reasons discussed above.

Attached hereto is a marked-up version of the changes made to the abstract and claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

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CONCLUSION

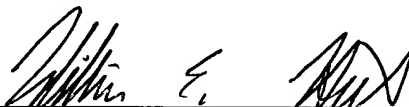
In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record and are in condition for allowance, and such action is earnestly solicited at the earliest possible date.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,

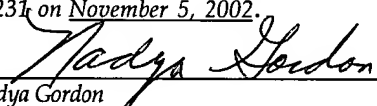
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Dated: 11/5/02



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CERTIFICATE OF MAILING:
I hereby certify that this correspondence is being deposited as First Class Mail with the United States Postal Service in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C.
20231, on November 5, 2002.
 11/5/02
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

On page 10, paragraph 54 is amended as follows:

It is appreciated that in addition to the horizontal and vertical gaps defined by the thickness of sacrificial material 230, additional gaps can similarly be formed in the structure defined, for example, by conventional lithographic techniques. **Figure 9** shows the structure of **Figure 7**, according to an alternative embodiment of this example, where gap 280 is patterned in the structure by, for example, photolithographic and etch techniques known in the art. **Figure 11-10** shows the structure of **Figure 10-9** after the removal of sacrificial material 230. The resulting structure includes vertical gaps 250A and 250B and horizontal gaps 260A, 260B, and 260C defined by the thickness of sacrificial material 230 (vertical gap width, horizontal gap height). **Figure 11-10** also shows structure with a wider gap 280 formed by photolithographic means.

Beginning on page 15, paragraph 75 is amended as follows:

Figure 26 shows the structure of **Figure 25** after the introduction of second structural ~~sacrificial~~ material 440. Second sacrificial material 440 is conformally introduced over structural material 440 ~~including~~ and first sacrificial material portion 430A, 430B, 430C, 430D, and 430E and over first structural material portions 420A, 420B, and 420C (e.g., conformally over the horizontal and vertical components). In one example, second sacrificial material 440 is similar to first sacrificial material 430. In the case of SiO₂, second sacrificial material 440 may be introduced by deposition or thermal growth (where substrate 410 and first structural materials 420A, 420B, and 420C are silicon).

On page 17, paragraph 80 is amended as follows:

By introducing sacrificial material layers or films (e.g., first sacrificial material 430 and second sacrificial material 440) in a sequential fashion, the vertical gap width, W_v ,

and horizontal gap height, W_h , may be formed of different dimensions although each is defined by the thickness of the introduced (deposited) sacrificial layers or films. In other words, the horizontal (y -direction) gap formed on substrate 410 is defined by, in this example, a single layer of sacrificial material, while the vertical (z -direction) gap is defined by a thickness of two layers of sacrificial material. Accordingly, as illustrated in **Figure 30**, the vertical gap width, W_v , is greater than the horizontal gap height, W_h , by an amount equal to the thickness of the first sacrificial material layer or film.

On page 17, paragraph 81 is amended as follows:

In addition to forming vertical (z -direction) and horizontal (y -direction) gaps between structures and the substrate, respectively, by the layer or film thickness of one or more sacrificial material layers or films, other gaps may be formed by conventional photolithographic techniques. According to a second embodiment of the third example, **Figure 31** shows the structure of **Figure 29** wherein a photolithographically-formed gap or opening 480 is formed in the structure. Such gap may be formed by conventional masking and etching techniques as known in the art. **Figure 32** shows the structure of **Figure 31** after removal of first sacrificial material 430 and second sacrificial material 440 as described above with reference to **Figure 30** and the accompanying text.

IN THE CLAIMS

The claims are amended as follows:

1. (Amended) A method comprising:
over an area of a substrate, forming a plurality of three dimensional first structures;
following forming the first structures, conformally introducing a sacrificial material over the area of the substrate;
introducing a second structural material over the sacrificial material; ~~and~~
exposing a portion of the sacrificial material; and
removing the sacrificial material.

3. (Amended) The method of claim 21, wherein exposing a portion of the sacrificial material comprises removing a portion of the second structural material.
8. (Amended) A method comprising:
over an area of a surface of a substrate, lithographically patterning a plurality of first structures, the plurality of first structures having a first dimension about the surface of the substrate and a second different dimension;
following forming the first structures, conformally introducing a sacrificial material layer over the area of the substrate;
patterning the sacrificial material;
forming second structures over the sacrificial material; and
removing the sacrificial material.
11. (Amended) The method of claim 910, wherein exposing a portion of the sacrificial material comprises removing a portion of the second structural material.

Claims 2, 9, and 14-17 are cancelled.